

Notice of Allowability

Application No.

10/802,481

Examiner

Dan Washburn

Applicant(s)

PERRY ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment submitted 9/22/06.
2. ☒ The allowed claim(s) is/are 1,2,9-13,15,21 and 23.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>20061109</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Clifton Mueller on Wednesday November 8, 2006. See the Examiner Initiated Interview Summary sheet for a summary of the substance of the interview.

The application has been amended as follows:

Claim 1: Please amend the end of claim 1 in the following manner (language to be removed is in brackets and language to be added is underlined):

(starting with line 25) sending an output of the starting stage to an input of a next stage of the rendering pipeline, a final stage of the rendering pipeline determining the display image satisfying the rendering request[.];

and displaying the display image satisfying the rendering request.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The prior art does not describe a rendering pipeline including a set of stages connected serially to each other as a sequence of stages so that output of a previous stage provides input to a next stage, the sequence of stages including, in order, a preprocessed shape descriptor determination stage, a distance field determination stage, a distance values determination stage, an antialiased intensities determination stage, and a colorized image determination stage, and where the distance field determination stage determines a distance from a point in a co-planar field to an edge of the object, where the sign of the distance is negative if the point is outside the object, positive if the point is inside the object, and points on the edge having a zero distance. The prior art also does not describe a progressive cache including a set of caches, the set of caches including a preprocessed shape descriptor cache, a distance field cache, a distance values cache, an antialiased intensities cache, and a colorized image cache.

The closest prior art (Gaudette et al. US 6,867,782) describes caching data in a processing pipeline, where there is a caching stage that is associated with each processing stage in the pipeline (column 1 lines 66-67, column 2 lines 1-17). However, Gaudette doesn't describe that the processing stages include, in order, a preprocessed shape descriptor determination stage, a distance field determination stage, a distance values determination stage, an antialiased intensities determination stage, and a colorized image determination stage, and where the distance field determination stage determines a distance from a point in a co-planar field to an edge of the object, where

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the sign of the distance is negative if the point is outside the object, positive if the point is inside the object, and points on the edge having a zero distance. Further, Gaudette doesn't describe that the set of cache stages includes a preprocessed shape descriptor cache, a distance field cache, a distance values cache, an antialiased intensities cache, and a colorized image cache.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Washburn whose telephone number is (571) 272-5551. The examiner can normally be reached on Monday through Friday 8:30 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571) 272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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11/9/06


ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER